Quick Start Guide

528E Voice Processor

Symetrix

To download the full 528E User Guide, go to the 528E product page on www.symetrixaudio.com.

Before You Begin 1

What Ships in the Box

- ☑ The 528E hardware unit
- ☑ An IEC power cable
- ☑ This Quick Start Guide

Getting Help

You can download the complete 528E User's Guide from www.symetrixaudio.com.

If you have questions beyond the scope of the help guide, contact Symetrix Customer Service in one of the following ways:

Phone (425) 778-7728
8:00 am to 4:30 pm
Monday through Friday,
Pacific Time

Email tech@symetrixaudio.com

Web www.symetrixaudio.com

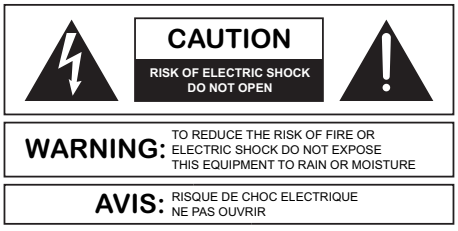
Notational Conventions in this Quick Start Guide

NOTE Identifies information that needs extra emphasis. Generally supplies extra information to help you to better use the 528E

CAUTION Identifies information that, if ignored, may cause damage to the 528E unit or other equipment in your system.

WARNING Identifies information that, if ignored, may be hazardous to your health or that of others.

CAPS Controls, switches or other markings on the chassis of the 528E.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE
AVIS: RISQUE DE CHOC ELECTRIQUE NE PAS OUVRIR
SEE OWNERS MANUAL. VOIR CAHIER D'INSTRUCTIONS.
No user serviceable parts inside. Refer servicing to qualified service personnel.
Il ne se trouve a l'interieur aucune piece pourvant entre reparée l'usager.
S'adresser a un reparateur compétent.

The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product (i.e. this quick start guide).

CAUTION *To prevent electric shock, do not use the polarized plug supplied with the unit with any extension cord, receptacle, or other outlet unless the prongs can be fully inserted.*

Important Safety Instructions. Please read and keep these instructions. Heed and follow all warnings and instructions. Install in accordance with the manufacturer's instructions.

Power Source. This product is intended to operate from a power source that does not apply more than 250V RMS between the power supply conductors or between either power supply conductor and ground. A protective ground connection, by way of the grounding conductor in the power cord, is essential for safe operation.

Grounding. The chassis of this product is grounded through the grounding conductor of the power cord. To avoid electric shock, plug the power cord into a properly wired receptacle before making any connections to the product. A protective ground connection, by way of the grounding conductor in the power cord, is essential for safe operation. **Do not defeat the safety purpose of the grounding plug.** The grounding plug has two blades and a third grounding prong. The third prong is provided for your safety. When the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.

Danger from Loss of Ground. If the protective ground connection is lost, all accessible conductive parts, including knobs and controls that may appear to be insulated, can render an electric shock.

Proper Power Cord. Use only the power cord and connector specified for the product and your operating locale. Use only a cord that is in good condition. **Protect the power cord** from being walked on or pinched, particularly at the plug, convenience receptacle, and the point where the cord exits from the apparatus.

Phantom Power. To prevent hazard or damage, ensure that only microphone cables and microphones designed to IEC-268-15A are connected.

Proper Fuse. The user accessible fuse is a part of the IEC AC inlet connector. The fuseholder accepts 5 x 20 mm diameter fuses. For 117 VAC operation, the correct value is 0.25 A, 250 VAC, standard. For 230 VAC operation, the correct value is 0.125A, 250 VAC, standard.

Operating Location. Do not operate this equipment under any of the following conditions: explosive atmospheres, in wet locations, in inclement weather, improper or unknown AC mains voltage, or if improperly fused. Do not install near any heat source such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Unplug this apparatus during lightning storms or when unused for long periods of time.

Stay Out of the Box. To avoid personal injury (or worse), do not remove the product covers or panels. Do not operate the product without the covers and panels properly installed. Only use accessories specified by the manufacturer. Clean only with a dry cloth.

User Serviceable Parts. There are no user serviceable parts inside the 528E. In case of failure, customers inside the U.S. should refer all servicing to the factory. Customers outside the U.S. should contact their distributor. Distributor contact information is available online at www.symetrixaudio.com. Servicing is required when the 528E has been damaged in any way, such as when a power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

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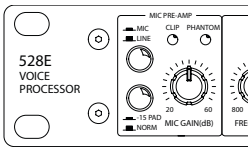
Front Panel 2

Mic Preamp



MIC/LINE — Selects between the Mic input (switch in) and Line input (switch out).

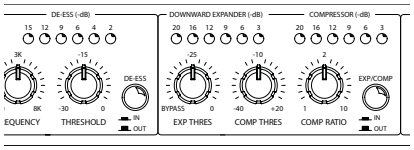
-15 PAD — Inserts 15 dB pad for strong mic signals.

MIC GAIN(dB) — Sets the gain of the mic preamp for best compromise between signal-to-noise ratio and headroom.

CLIP — Monitors inputs (mic and line) for clipping. Illuminates 3 dB below the actual clip point.

PHANTOM — Illuminates when 48V phantom power is present at the microphone input connector. The phantom power switch is located on the rear panel.

De-Esser



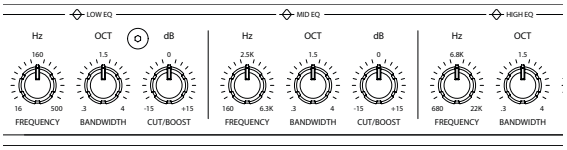
FREQUENCY — Sets the rolloff (cutoff) frequency of the de-esser.

THRESHOLD — Sets the threshold level for the de-esser. Signals above this level cause de-esser action, signals below do not.

DE-ESS IN/OUT — Hard-wire bypasses the de-esser. The de-esser is active when this switch is in.

LED Display — Indicates the amount of de-esser activity at any instant in time.

Downward Expander / Compressor



EXP THRES — Sets the threshold level for the downward expander. Signals below this threshold are downward expanded (reduced in level).

EXPANDER LED Display — Indicates the amount of de-esser activity at any instant in time.

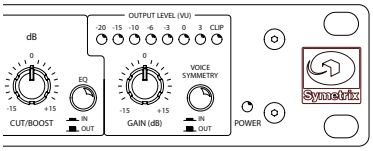
COMP THRES — Sets the threshold level for the compressor. Signals above this threshold cause gain reduction in the compressor.

COMP RATIO — Sets the compression ratio of the compressor.

EXP/COMP IN/OUT — Defeats the downward expander / compressor. This is not a hard-wire bypass.

COMPRESSOR LED Display — Indicates the amount of compressor activity (gain reduction) at any given instant in time.

Parametric EQ Low



FREQUENCY — Varies the center frequency of the low-frequency equalizer from 16 Hz to 500 Hz.

BANDWIDTH — Varies the bandwidth of the low-frequency equalizer from 0.3 to 4 octaves. (Q = 0.27 to 4.8).

CUT/BOOST — Set the degree of boost or cut +/- 15 dB.

Front Panel (cont.) 3

Parametric EQ Mid

FREQUENCY — Varies the center frequency of the low-frequency equalizer from 160 Hz to 6.3k Hz.

BANDWIDTH — Varies the bandwidth of the low-frequency equalizer from 0.3 to 4 octaves. (Q = 0.27 to 4.8).

CUT/BOOST — Set the degree of boost or cut +/- 15 dB.

Parametric EQ High

FREQUENCY — Varies the center frequency of the low-frequency equalizer from 680 Hz to 22 kHz.

BANDWIDTH — Varies the bandwidth of the low-frequency equalizer from 0.3 to 4 octaves. (Q = 0.27 to 4.8).

CUT/BOOST — Set the degree of boost or cut +/- 15 dB.

EQ IN/OUT — Hard-wire bypasses the entire equalizer.

Output Section

GAIN — Sets the overall gain of the 528E's output over a +/- 15 dB range.
NOTE: The actual adjustment point is in the expander/compressor's VCA, which is pre-EQ.

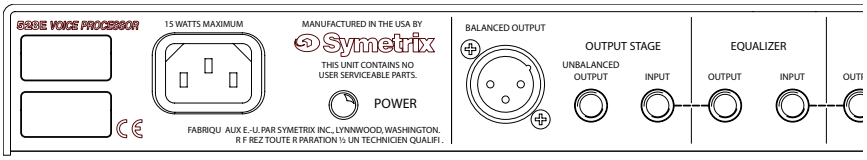
VOICE SYMMETRY — Inserts speech waveform asymmetry correction into the signal path.

OUTPUT LED — Indicates the peak output level of the 528E relative to the balanced output. The 0 VU LED on the display corresponds to +4 dBu at the balanced output. For unbalanced applications, the actual output level is 6 dB lower than that shown by the display.
NOTE: If the internal mic-level output switch has been depressed, the output level is -40 dBu when the display indicates 0 VU.

POWER LED — Indicates the presence of AC power.

Rear Panel

Power



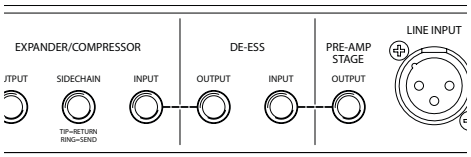
AC INPUT — IEC power connector. Connect only to appropriate AC power source. Refer to rear panel marking for correct AC source voltage.

POWER SWITCH — Turns the 528E on and off.

SERIAL NUMBER — Please note the serial number for future reference. Should your 528E ever require service, Symetrix Customer Service will need this information in order to process your repair request.

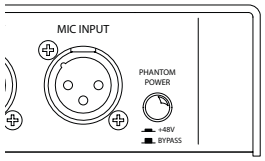
Rear Panel (cont.) 4

Output Stage I/O



BALANCED OUTPUT	XLR male connector. Balanced, line level output. This output may be converted to a mic level output. See **Output Level Switch** on **page 10**.
UNBALANCED OUTPUT	TRS phone jack (wired for unbalanced operation). Provides a line level unbalanced output. This jack is unaffected by the Mic Level Output Configuration switch mentioned above.
OUTPUT STAGE INPUT	TRS phone jack (wired for unbalanced operation). This is the input to the output stage. Inserting a connector into this jack will interrupt any signal coming from previous (upstream) modules of the 528E.

Equalizer I/O



OUTPUT	TRS phone jack (wired unbalanced). This is the output of the equalizer. Inserting a connector into this jack does not interrupt signal flow to the 528E's output stage.
INPUT	TRS phone jack (wired unbalanced). This is the input to the equalizer. Inserting a connector into this jack interrupts signal flow from the Expander / Compressor.

Expander / Compressor I/O

OUTPUT	TRS phone jack (wired unbalanced). This is the output of the expander / compressor. Inserting a connector into this jack does not interrupt signal flow to the equalizer.
SIDECHAIN	TRS phone jack wired as an insert jack. (Tip = return, Ring = Send). Use this jack trigger or "key" the compressor / expander from an external source.
INPUT	TRS phone jack (wired unbalanced). This is the input to the expander / compressor. Inserting a connector into this jack interrupts signal flow from the de-esser.

De-esser I/O

OUTPUT	TRS phone jack (wired unbalanced). This is the output of the de-esser. Inserting a connector into this jack does not interrupt signal flow to the 528E's expander / compressor.
INPUT	TRS phone jack (wired unbalanced). This is the input to the expander / compressor. Inserting a connector into this jack interrupts signal flow from the mic / line inputs.

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Rear Panel (cont.) 5

Preamp Stage I/O

PREAMP STAGE OUTPUT	TRS phone jack (wired unbalanced). This is the output of the mic / line preamp. Inserting a connector into this jack will not interrupt signal flow to the 528E's de-esser.
LINE INPUT	XLR female connector providing a 10k Ohm balanced bridging line input intended for signals ranging from -10 dBu to +4 dBu.
MIC INPUT	XLR female connector providing a balanced input suitable for low impedance microphones. 48V phantom powering is available at this connector.
PHANTOM POWER	Pushbutton switch enabling 48V phantom power on the MIC INPUT.

Quick Setup

Now that you're familiar with the controls, you can use this section to get signal running through the 528E quickly.

Connections

Connect a Mic or Line level source to the appropriate input connector on the rear of the 528E. Be sure to set the Mic / Line switch to the appropriate position and be sure to turn on phantom power if using a microphone that requires it. Next, connect the appropriate output of the 528E to your monitoring system or mixing console. Finally, connect the 528E to an AC source of the proper voltage and frequency as marked on the rear of the unit.

Settings

Set the controls and switches on the front of the 528E per the following table:

Front Panel Control	Setting	Front Panel Control	Setting
MIC / LINE	As required	LOW EQ FREQUENCY	160 Hz (12 o'clock)
-15 PAD	Out	LOW EQ BANDWIDTH	1.5 octaves (12 o'clock)
MIC GAIN	12 o'clock	LOW EQ CUT/BOOST	0 (12 o'clock)
DE-ESS FREQUENCY	3K (12 o'clock)	MID EQ FREQUENCY	2.5K (12 o'clock)
DE-ESS THRESHOLD	0 (Full CW)	MID EQ BANDWIDTH	1.5 octaves (12 o'clock)
DE-ESS IN / OUT	Out	MID EQ CUT/BOOST	0 (12 o'clock)
DOWNWARD EXPANDER EXP THRES	BYPASS (Full CCW)	HIGH EQ FREQUENCY	6.8K (12 o'clock)
COMPRESSOR COMP THRES	+20 (Full CW)	HIGH EQ BANDWIDTH	1.5 octaves (12 o'clock)
COMPRESSOR COMP RATIO	2 (12 o'clock)	HIGH EQ CUT/BOOST	0 (12 o'clock)
EXP/COMP IN / OUT	Out	EQ IN / OUT	Out
VOICE SYMMETRY IN / OUT	Out	GAIN	0 (12 o'clock)

You can now power on the 528E and it should pass signal. The OUTPUT LEVEL LED display should show some activity and the POWER LED should be illuminated. We can now move on to fine tuning your settings.

Refining Your Settings 6

Mic Preamp Gain Settings

Set the MIC GAIN control so that the OUTPUT LEVEL LED display indicates a signal between -10 and 0 VU. The CLIP LED should almost never light. If it does, decrease the MIC GAIN control until it does not. Any loss in gain can be made up for later in the signal chain.

De-Esser Settings

The De-Esser is used to reduce the level of objectionable sibilant sounds (S and T sounds). Engage the De-Esser by pressing the DE-ESS IN / OUT button IN. Set the THRESHOLD control so that the de-esser gain reduction LED display shows about 12 dB of reduction. Now, “tune” the FREQUENCY control for the maximum sibilance reduction. Finally, reduce the setting of the THRESHOLD control until you reduce the sibilance to a tolerable level without harming the quality of the audio signal.

Downward Expander Settings

Use the Expander to reduce room noise or other low level or background noise. Set the THRESHOLD control to allow low level speech sounds to pass while still blocking out room sound or noise.

Compressor Settings

Use the COMP THRES control to determine the level at which the compressor starts to work. As the sound level increases above the set threshold, you will see the gain reduction LED display start to work indicating the amount of gain reduction taking place. Generally 3 to 6 dB is sufficient, unless you are using a low compression ratio (below 2:1), or you want a special effect. Pick a ratio suited to the task at hand: low ratios and low thresholds for unobtrusive level control, medium ratios for overall level control and consistency, high ratios (greater than 8:1) for limiting or in-your-face sorts of sounds.

Equalizer Settings

Equalization is entirely dependent upon many factors and should generally be used to correct or enhance the frequency content of the signal. For example, the default settings should be close for the male voice. For female voices, the LOW EQ range shifts up to 200 or 300 Hz and the MID EQ range shifts up to 3-5 kHz.

If you are using a microphone that exhibits proximity effect, then you’ll probably need to reduce (cut) the bass (LOW EQ) response somewhat. 3-6 dB should be fine, but you’ll have to compromise between a big full sound and the overbearing low frequency content. A bit of MID EQ will help make voices cut through and seem louder. The HIGH EQ can add brightness and intimacy.

It will take some tuning and experimentation based on the signal source, microphone used and personal taste.

Output Settings

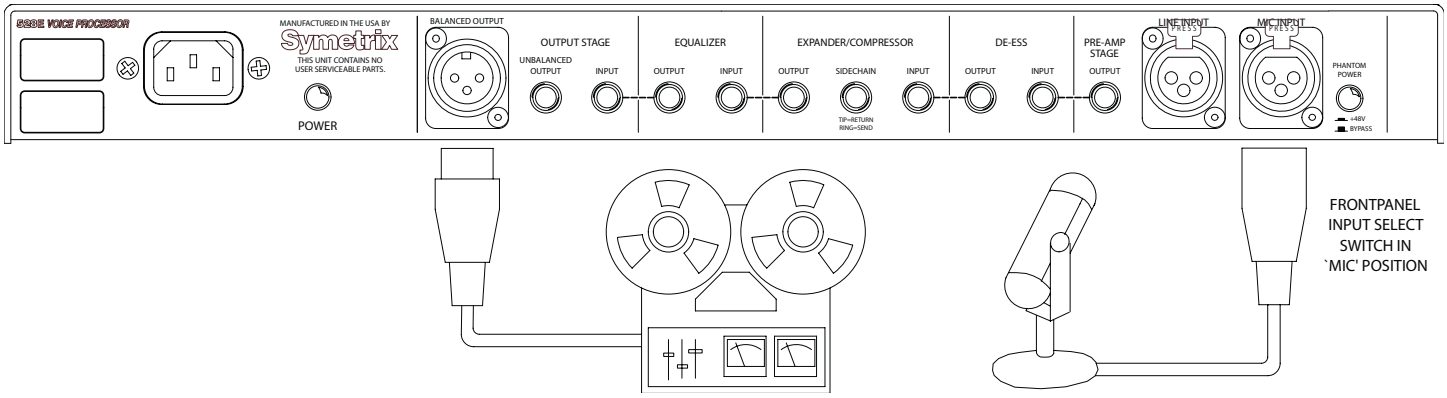
For many applications, setting the output GAIN control to 0 dB works fine. If you are adding a lot of EQ, this will tend to cause an overall level increase. Thus, you may need to lower the output GAIN appropriately. Likewise, if you are using a fair amount of compression, you may need to add some gain to compensate for the gain reduction in the compressor section. You should adjust the output GAIN control so that it provides enough signal level to your connections downstream, yet still prevents the CLIP LED from illuminating.

The output CLIP LED monitors both the equalizer and the output stage. Large amounts of EQ boost and/or high signal levels can cause CLIP indications. If this occurs, lower the signal level via the GAIN control. It is also possible for the output stage to clip if a processor, inserted via the OUTPUT STAGE INPUT jack, is contributing gain to the overall signal path. In this case, either lower the gain of the inserted processor or reduce the setting of the output GAIN control.

Typical Setups 7

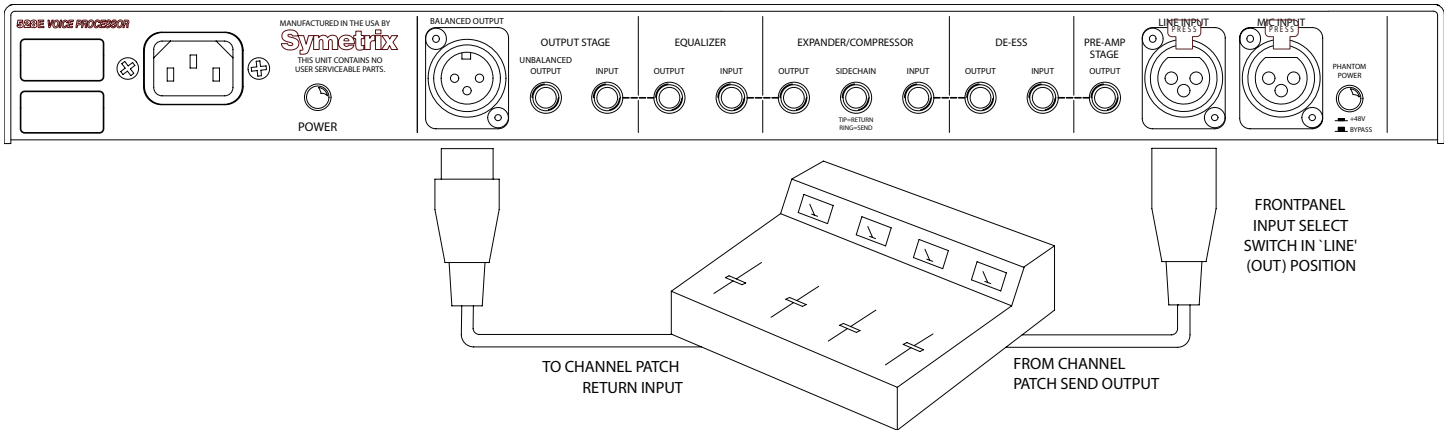
Stand-alone operation

A vast majority of users use the 528E as a stand-alone device. Here the 528E replaces their usual microphone preamp and either feeds their tape machine or workstation directly, in essence becoming a one-input, one-output console.



As A Channel Insert Device

In this situation, you are using the 528E as a line signal processor, utilizing the 528E's de-esser, expander/compressor and equalizer while using your console's input and output stages.



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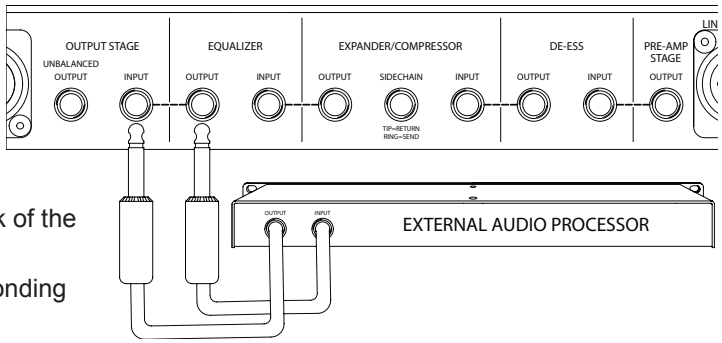
Using The Patch Points 8

Inserting Additional Processing

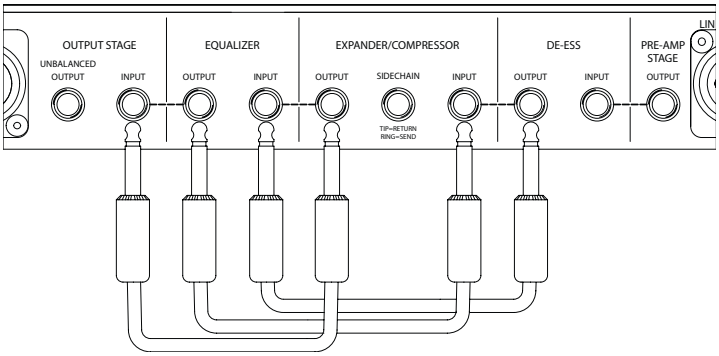
This illustration shows an external processor inserted between the 528E's equalizer and its output stage. To insert additional (external) processing into the 528E's signal path:

1. Decide where in the 528E's signal path you wish to insert the external processor.
2. Patch the appropriate output jack on the 528E to the input jack of the external processor. Use either a TRS or TS patchcord.
3. Patch the output jack of the external processor to the corresponding input jack on the 528E. Use either a TRS or TS patchcord.



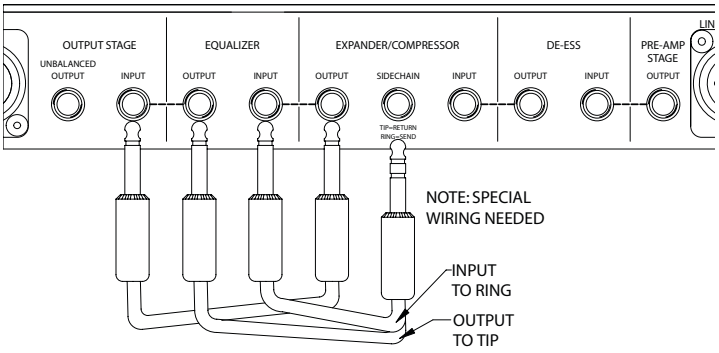
Changing The Sequence Of Processing

You may wish to change the sequence of processing within the 528E to allow the signal processors to work on the input signal in a particular way (your way). A good example of this is the compressor: should the equalizer precede or follow the compressor. Most studio engineers would have the equalizer follow the compressor, like it normally does in the 528E. In broadcast, many engineers prefer the opposite; the compressor receives the output of the equalizer.



Using The Equalizer In The Sidechain

For some applications, you may want the 528E's equalizer in its sidechain rather than in the signal path. Doing so makes both the compression and downward expansion frequency conscious.



Other Notes Of Interest 9

Signal Levels

The 528E is designed around studio/professional line levels: +4 dBu or 1.23 volts. The unit is quiet enough to operate at lower signal levels such as those found in semi-pro or musical-instrument (MI) equipment (-10 dBu or 300 millivolts).

The microphone input is designed to accept low-impedance microphones. Switchable 48V phantom powering is provided for suitable condenser microphones. The microphone input accepts signal levels from -60 to -5 dBV (+10 dBV with the -15 dB pad).

The line input is designed to accept nominal line level: +4 dBu.

The output line driver delivers +4 dBm into 600 Ohm or higher balanced loads. An internal switch converts the line level output to microphone level, or -36 dBu. An unbalanced output is also available via a 1/4" TRS phone jack. This jack is always line-level and is unaffected by the internal switch.

When using the 528E with HAM radio equipment, it may be necessary to build an "L" pad attenuator in order to level match the 528E's unbalanced 1/4" TRS output to a HAM radio transceiver's unbalanced input. The 528E has a level of -2 dBu (-10 dBV) at it's unbalanced output which translates to 0.615 volts RMS. The typical HAM radio transceiver has an input impedance of 10k Ohms so it would be expecting a level of 0.100 volts RMS. Knowing this, one can build an "L" pad attenuator with a 3600 Ohm series resistor followed by an 820 Ohm resistor to ground. This will give approximately 15.58 dB of attenuation thus providing a suitable level to the HAM radio transceiver input.

I/O Impedances

The 528E is designed to interface into almost any recording studio or sound reinforcement application.

This includes:

• 600 Ohm systems where input and output impedances are matched.

• Unbalanced semi-professional equipment applications.

• Modern bridging systems where inputs bridge and outputs are low source impedances (voltage transmission systems).

The 528E's microphone input is intended to bridge a 150 Ohm balanced source. The actual input impedance is approximately 8k Ohms. 48V phantom powering for condenser microphones is present if the PHANTOM POWER switch has been depressed.

The 528E's line input impedance is 10k Ohms balanced, and 10k Ohms unbalanced. The inputs may be driven from any source (balanced or unbalanced) capable of delivering at least -10 dBu into the aforementioned impedances.

The 528E's output impedance is 200 Ohms balanced, 100 Ohms unbalanced. The output line driver delivers +18 dBm into a 600 Ohm balanced load or +18 dBm into 600 Ohm unbalanced loads.

I/O Impedances

The 528E uses the international standard polarity convention of pin 2 hot. Therefore:

XLR	Tip-Ring-Sleeve	Signal
1	Sleeve	Ground
2	Tip	High
3	Ring	Low

If your system uses balanced inputs and outputs, and uses the 528E this way, then the polarity convention is unimportant. If your system is both balanced and unbalanced, then you must pay attention to this, especially when going in and coming out through different connector types (like input on an XLR, output on a phone jack).

Further Information

Much more information including an online tutorial, customer submitted settings, frequently asked questions and trouble shooting information as well as the complete user's guide can be found on the Symetrix web site at (http://www.symetrixaudio.com).

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Output Level Switch 10

WARNING **Lethal voltages are present inside the chassis. Perform all service work with the unit disconnected from all AC power.**

CAUTION *These servicing instructions are for use by qualified personnel only. To avoid electric shock, do not perform any servicing other than that contained in the operating instructions portion of this manual unless you are qualified to do so. Refer all servicing to qualified service personnel.*

Tools Required

1. #2 Phillips-head screwdriver

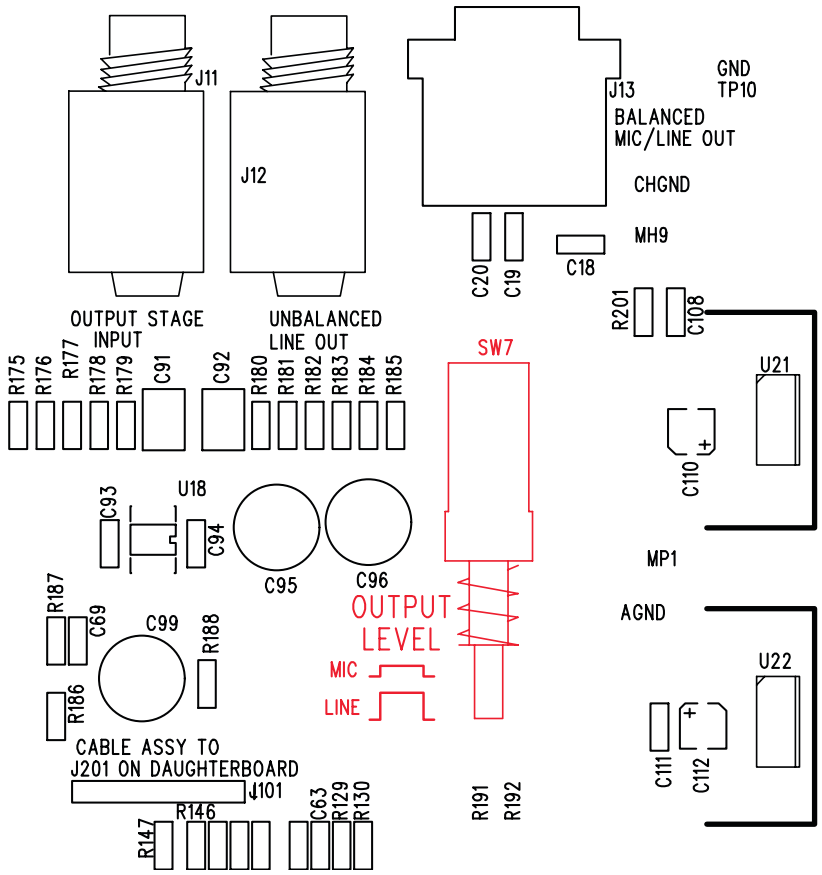
Top Cover Removal

1. Ensure that the 528E is disconnected from the AC power source.
2. Remove two 6-32 x 1/2 inch screws from the top panel and two 6-32 x 1/2 inch screws from each side of the chassis.
3. Lift the top cover free of the chassis.

Changing The XLR Output Level

The 528E ships from Symetrix with the XLR output configured for a line level output. If you must have a microphone level output, the following steps lead you through the process of switching the XLR line level output to microphone level (or back to line level).

1. Remove the top cover according to the steps outlined above.
2. As you look at the unit with the front panel facing you, locate the OUTPUT LEVEL switch (SW7) in the upper right side of the unit just below the XLR output connector. SW7 is in red in the diagram below.
3. Push the switch in to select MIC level output or out to select LINE level output.
4. Replace the top cover.
5. Reinstall the 528E into your setup.



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Specifications 11

Inputs

Controls and Switches	Mic Gain, Phantom Power, Mic/Line
Mic and Line Input Connectors	XLR-female (2)
Clip LED	Lights at +17 dBu output level from mic preamp or line input amplifier
Microphone Input Type	Balanced Transformerless, Low Impedance
Phantom Power (DIN 45 596)	+48V, nominal
Microphone Preamp Gain	22 to 60 dB (pad out) 7 to 45 dB (pad in)
Microphone Input Maximum Input Level	-3 dBu (pad out)
Equivalent Input Noise (EIN)	-126 dBV (150-0 Ohm source, 20 Hz to 20 kHz)
THD + Noise (Preamp only)	0.05% (2 kHz, 50 dB gain, +17 dBu output)
Mic Preamp CMRR	> 60 dB (40 dB gain, 20 Hz to 20 kHz)
Line Input Type and Impedance	10k Ohm Transformerless Balanced Bridging
Line Input Maximum Input Level	+24 dBu
Line Input Nominal Input Level	+4 dBu
Line Input CMRR	> 50 dB (0 dBu, 20 Hz to 20 kHz)

Parametric Equalizer

Type	Three-band Parametric Equalizer
Bands	Low: 16 to 500 Hz, Mid: 160 to 6300 Hz High: 680 Hz to 22 kHz
Peak/Dip Bandwidth	0.3 to 4 octaves, measured at maximum boost
Maximum Boost/Cut	+/- 15 dB

Metering

Type	Multi-segment LED bar graph
Output Level	-20 to +3 VU (0 VU = +4 dBu), VU calibrated, peak responding
Gain Reduction	Separate displays for: de-esser, downward expander, and compressor 0 to 20 dB per display

Overall Performance Data

Frequency Response	20 Hz to 20 kHz (+0, -0.5 dB), EQ cut compressor out, downward expander out, de-esser out
THD + Noise	0.05%, 20 Hz to 20 kHz, +4 dBm output
Noise Floor	Better than -89 dBu, 20 Hz to 20 kHz

Dynamic Range Processor

Type	Interactive Comp/Limiter-Downward Expander
Comp/Limiter Ratio	1:1 to 10:1
Downward Expansion Ratio (max)	1:1.8
De-esser Type	Program controlled high-cut filter, 12 dB/octave
Frequency Range	800 Hz to 8000 Hz
Threshold	-30 to 0 dBu
Output Section Type	Balanced, Transformerless
Maximum Output Level	+24 dBm Balanced, +18 dBm Unbalanced
Connector	XLR-male
Output Clip LED	Lights 3 dB below clipping
Output Source Impedance	200 Ohms, Balanced
Minimum Load Impedance	600 Ohms Balanced or Unbalanced
Voice Symmetry Switch	Improves modulation symmetry of speech signals
Output Gain	+/- 15 dB

Physical

Size (hwd)	1.72 x 19 x 7.25 inches, 4.37 x 48.26 x 18.415 centimeters
Weight	7.6 lbs (3.5 kg) net, 10 lbs (4.6 kg) shipping

Electrical

Power Requirements	117V nominal, 105 to 125V AC, 50 to 60 Hz, 15 watts maximum
	230V nominal, 205 to 253V AC, 50 Hz 15 watts maximum

Note: The maximum operating ambient temperature is 25 degrees C.

Specifications subject to change without notice.

Warranty & Service 12

The Symetrix Limited Warranty

Symetrix, Inc. expressly warrants that the product will be free from defects in material and workmanship for eighteen (18) months from the date the product is shipped from the factory. Symetrix's obligations under this warranty will be limited to repairing or replacing, at Symetrix's option, the part or parts of the product which prove defective in material or workmanship within eighteen (18) months from the date the product is shipped from the factory, provided that the Buyer gives Symetrix prompt notice of any defect or failure and satisfactory proof thereof. Products may be returned by Buyer only after a Return Authorization number (RA) has been obtained from Symetrix. Buyer will prepay all freight charges to return the product to the Symetrix factory. Symetrix reserves the right to inspect any products which may be the subject of any warranty claim before repair or replacement is carried out. Symetrix may, at its option, require proof of the original date of purchase (dated copy of original retail dealer's invoice). Final determination of warranty coverage lies solely with Symetrix. Products repaired under warranty will be returned freight prepaid via United Parcel Service by Symetrix, to any location within the Continental United States. Outside the Continental United States, products will be returned freight collect.

The foregoing warranties are in lieu of all other warranties, whether oral, written, express, implied or statutory. Symetrix, Inc. expressly disclaims any IMPLIED warranties, including fitness for a particular purpose or merchantability. Symetrix's warranty obligation and buyer's remedies hereunder are SOLELY and exclusively as stated herein.

This Symetrix product is designed and manufactured for use in professional and studio audio systems and is not intended for other usage. With respect to products purchased by consumers for personal, family, or household use, **Symetrix expressly disclaims all implied warranties, including but not limited to warranties of merchantability and fitness for a particular purpose.**

This limited warranty, with all terms, conditions and disclaimers set forth herein, shall extend to the original purchaser and anyone who purchases the product within the specified warranty period.

Symetrix does not authorize any third party, including any dealer or sales representative, to assume any liability or make any additional warranties or representation regarding this product information on behalf of Symetrix.

This limited warranty gives the buyer certain rights. You may have additional rights provided by applicable law.

NOTE: Some Symetrix products contain embedded software and may also be accompanied by control software intended to be run on a personal computer. Said software is specifically excluded from this warranty.

Limitation of Liability

The total liability of Symetrix on any claim, whether in contract, tort (including negligence) or otherwise arising out of, connected with, or resulting from the manufacture, sale, delivery, resale, repair, replacement or use of any product will not exceed the price allocatable to the product or any part thereof which gives rise to the claim. In no event will Symetrix be liable for any incidental or consequential damages including but not limited to damage for loss of revenue, cost of capital, claims of customers for service interruptions or failure to supply, and costs and expenses incurred in connection with labor, overhead, transportation, installation or removal of products, substitute facilities or supply houses.

Servicing the 528E

If you have determined that your 528E requires repair services and you live outside of the United States please contact your local Symetrix dealer or distributor for instructions on how to obtain service. If you reside in the U.S. then proceed as follows.

Return authorization

At the Symetrix factory, Symetrix will perform in-warranty or out-of-warranty service on any product it has manufactured for a period of three years from date of manufacture.

Before sending anything to Symetrix, please contact our Customer Service Department for a return authorization (RA) number. The telephone number is (425) 778-7728. Additionally support is available via E-mail through tech@symetrixaudio.com or via the web site http://www.symetrixaudio.com.

Warranty & Service (cont.) 13

In-warranty repairs

To get your 528E repaired under the terms of the warranty:

1. Call us for an RA number.
2. Pack the unit in its original packaging materials.
3. Include your name, address, daytime telephone number, and a brief statement of the problem.
4. Write the RA number on the outside of the box.
5. Ship the unit to Symetrix, freight prepaid. We do not accept freight collect shipments.

Just do these five things, and repairs made in-warranty will cost you only one way freight charges. We'll pay the return freight.

If you don't have the factory packaging materials, we recommend using an oversize box. Wrap the unit in a plastic bag, surround it with bubble-wrap, and place it in the box surrounded by Styrofoam peanuts. Be sure there is enough clearance in the box to protect the rack ears. We won't return the unit in anything but Symetrix packaging for which we will have to charge you. If the problem is due to operator misuse or error, you will have to pay for both parts and labor. In any event, if there are charges for the repair, you will pay for the return freight. All charges will be COD unless you have made other arrangements (prepaid, Visa or Mastercard).

Out-of-warranty repairs

If the warranty period has passed, you'll be billed for all necessary parts, labor, packaging materials, and freight charges. Please remember, you must call for an RA number before sending the unit to Symetrix.

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